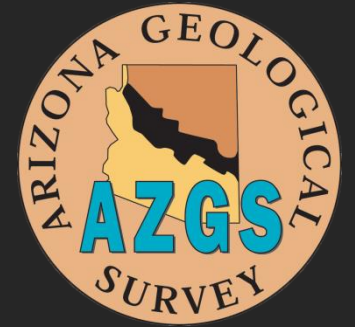


# Story maps – Visualizing our World

## ArcGIS Online – Google Earth



Michael Conway  
Michael.Conway@azgs.az.gov

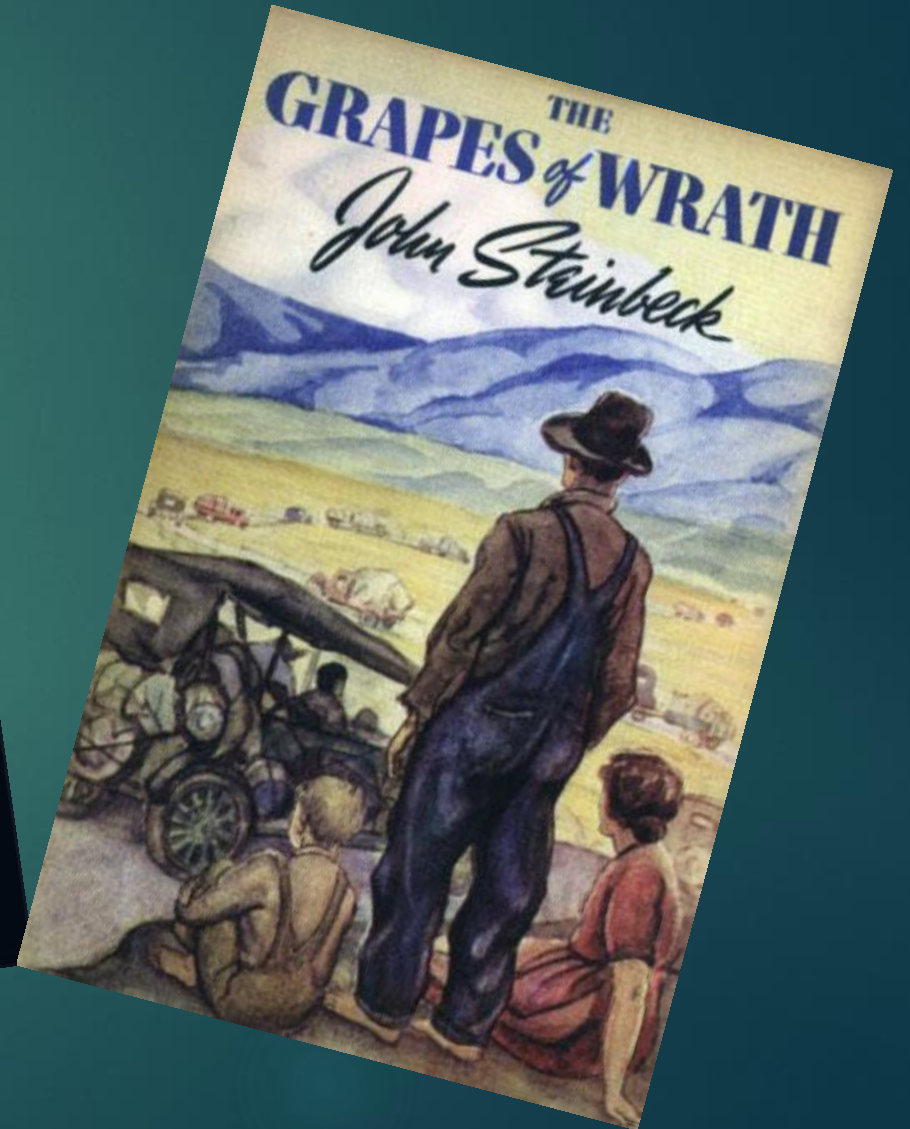
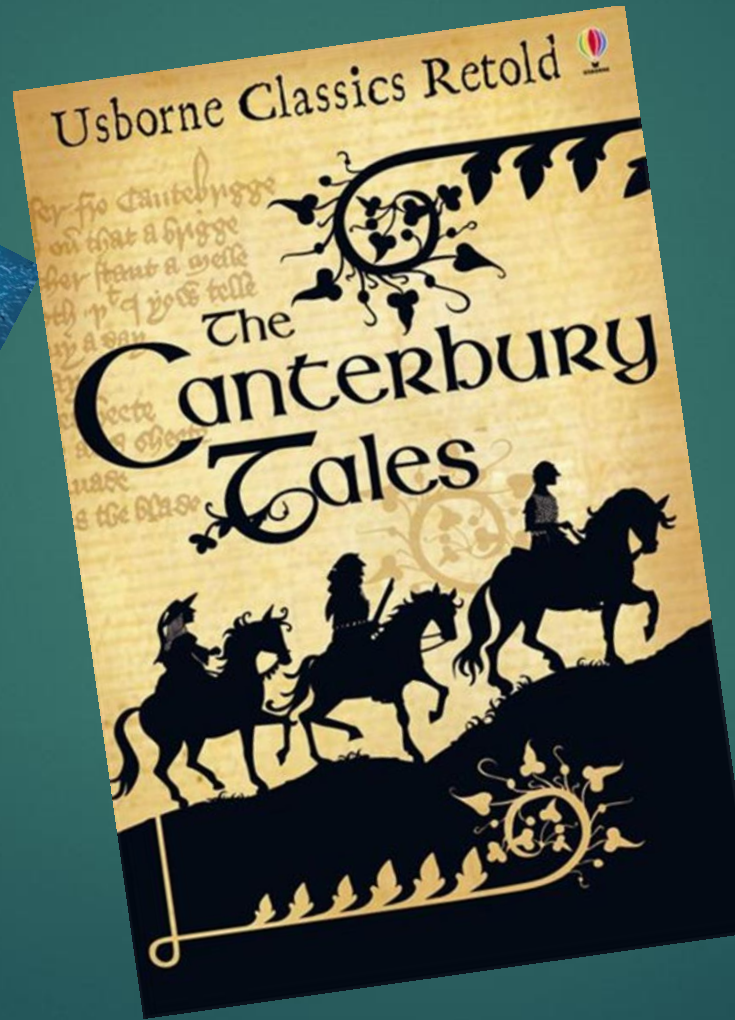
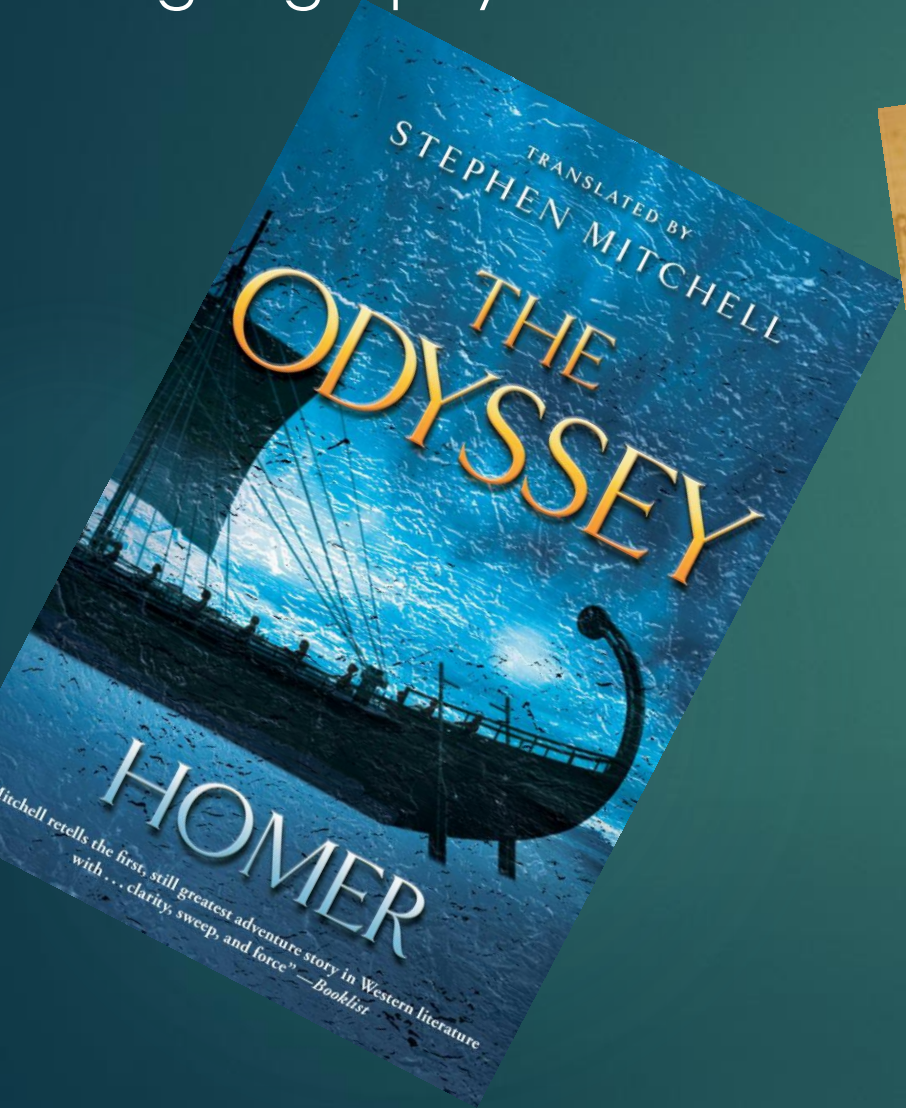


Rowena Davis  
Rowena.davis@azgs.az.gov



# What in the world is a story map?

A new twist on an old tale – building & sharing geography-based narratives



# GIS | Story Maps

## ENGAGING AND EMPOWERING

GIS promotes computer literacy in primary, secondary, and university settings; appeals to visual learners; and supports a variety of disciplines, including: environmental studies, geography, language arts, chemistry, Earth science, biology, and more (e.g., Theo, 2011, Shin, 2006, Wiegand, 2003).



# Six reasons to use story maps in the classroom



# 1. High-resolution imagery

Google earth

Exploring our world –  
land and sea

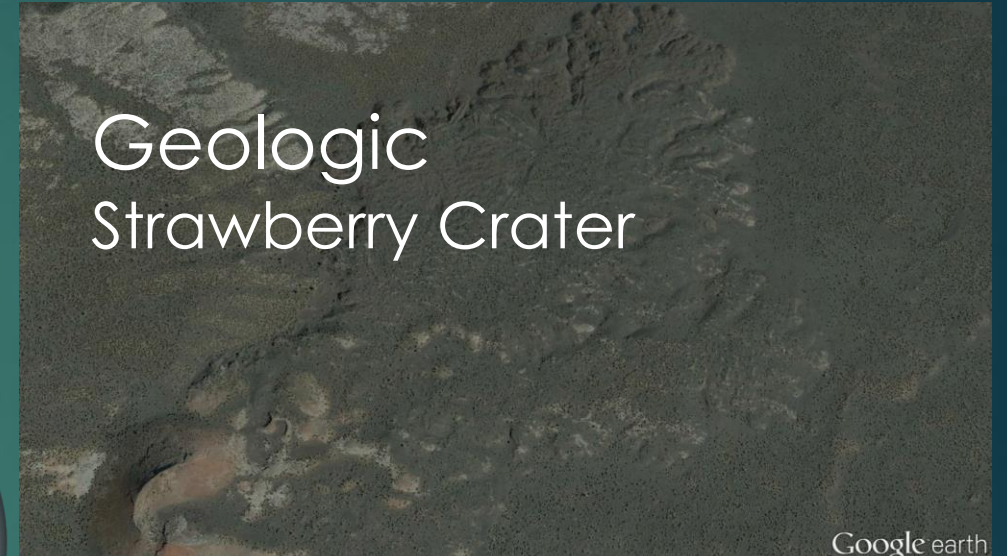
Relate class work to the earth's surface and  
identifiable landmarks to give a sense of place

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat  
Image IBCAO  
Image U.S. Geological Survey

Google earth



## 2. Tailor-made for environmental, biologic & cultural data






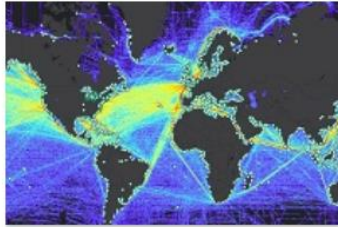
# 3. FREE: AZ site license for Esri (GIS) public | private | home school

Story Maps APPS GALLERY SUPPORT BLOG MY STORIES michaelconway\_uagis English


## Gallery




**Unexpected Catch: Seabirds and Fisheries**  
By cmpott\_abcbirds



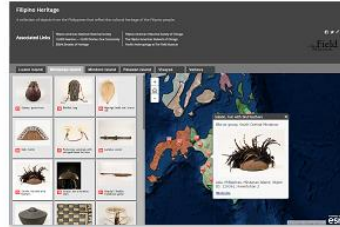
**The Reach of Supply Chain Management**  
By svaldizonTransport




**USAID Deliver Project: Anti-malaria supply chain**  
By Community\_examples




**Childs Frick Abyssinian Expedition: Carnegie Museum**  
By Community\_examples




**The Field Museum: Filipino Heritage**  
By Community\_examples




**TOP 10 THINGS TO EXPERIENCE WHEN YOU VISIT TACOMA**



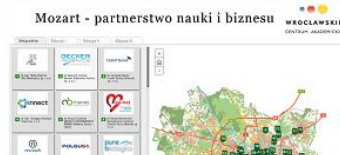
**Noc Muzeum we Wrocławiu**



**CENTER FOR URBAN AND REGIONAL ANALYSIS**




**Santa Clara Traffic Feeds**




**Mozart - partnerstwo nauki i biznesu**


## Hundreds of story maps and resources




**Michigan Wildfire and Prescribed Burn Locations**




**Wellington City Council Parks & Reserves**



**2014 Bicycle and Pedestrian Plan for the National Capital Region**



**California Condor: Soaring Again in the Western Skies**



**Absolutely Positively Wellington City Council**

# 4. Develop critical thinking

**BUY FRESH  
BUY LOCAL**

Your connection to Cape Cod's  
freshest from land and seal

Farmers Markets


Farms

Seafood


Restaurants

Retail


Inns & BnBs




1 Osterville Farmers' Market




2 Mid-Cape Farmers' Market




3 Harwich Farmers' Market




4 Wellfleet Farmer's Market




5 Green Harvest Organic Farmers' Market




6 Dennis Farmers' & Artisans Market




7 Chatham Farmers' Market




8 Bass River Farmers' Market




9 Falmouth Farmers' Market



10 West Dennis Farmers' Market



11 Sandwich Farmers' Market



12 Orleans Farmers' Market

Map created by Buy Fresh Buy Local  
Cape Cod  
is a program of  
Barnstable County

CAPE COD  
COMMISSION

COUNTY OF BARNSTABLE  
MASSACHUSETTS

+

Home

-

ArcGIS enhances map literacy,  
communication, and problem  
solving

New Bedford

Barnstable

12

6

3

7

8

10

2

1

5

9

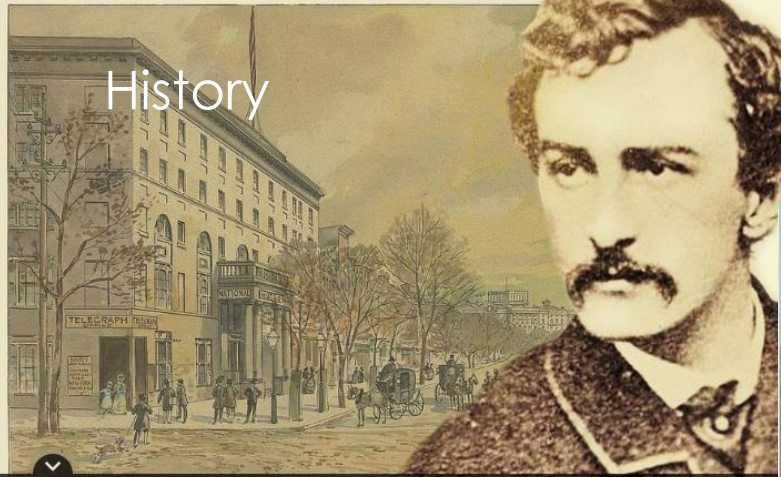
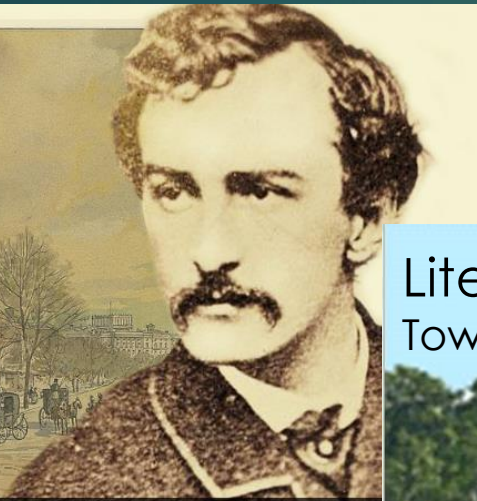
Esri HERE DeLorme MapmyIndia © OpenStreetMap contributors, and

POWERED BY  
esri



# 5. Meld science, literature and art to build compelling stories

History

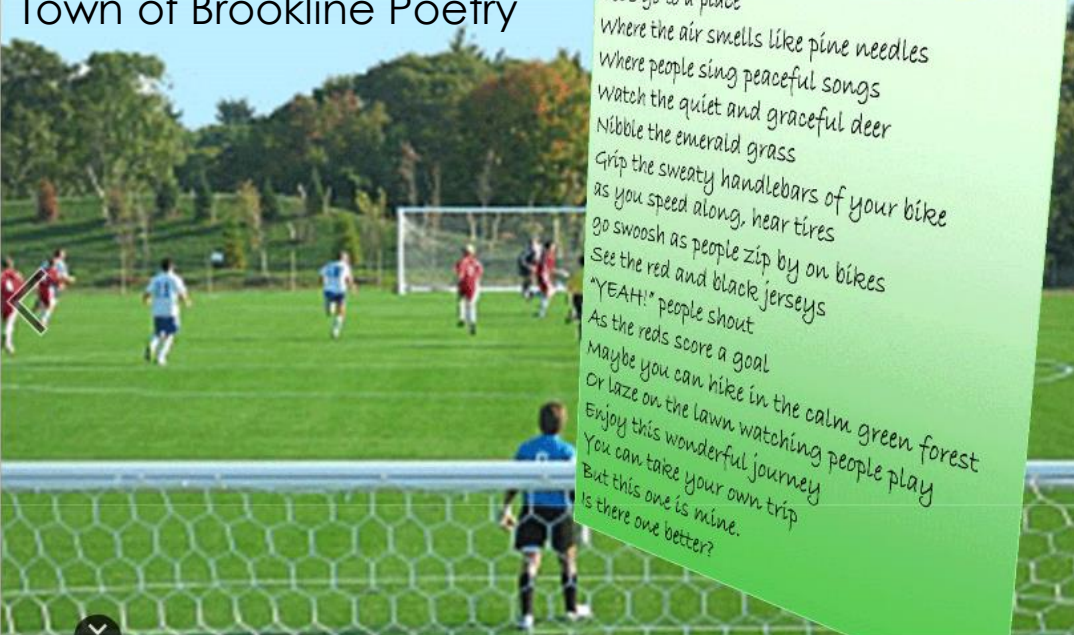


1865: Booth in Washington

Booth boarded in the National Hotel at the corner of 6th and Pennsylvania Avenue NW. The site is now occupied by the Newseum. Booth, a prominent actor, was admired by Lincoln.

Literature

Town of Brookline Poetry



Skyline Park

by Lance Boyer/Grade 4

Let's go to a place  
Where the air smells like pine needles  
Where people sing peaceful songs  
Watch the quiet and graceful deer  
Nibble the emerald grass  
Grip the sweaty handlebars of your bike  
As you speed along, hear tires  
Go swoosh as people zip by on bikes  
See the red and black jerseys  
"YEAH!" people shout  
As the reds score a goal  
Maybe you can hike in the calm green forest  
Or laze on the lawn watching people play  
Enjoy this wonderful journey  
You can take your own trip  
But this one is mine.  
Is there one better?

Back --> Salmon Stories Map

Restoring Hood Canal's Critical Salmon Nurseries

de-listed.



Ecology

Adult Summer Chum in spawning phase. Illustration Credit: U. S. Fish and Wildlife Service/Tim Knepp

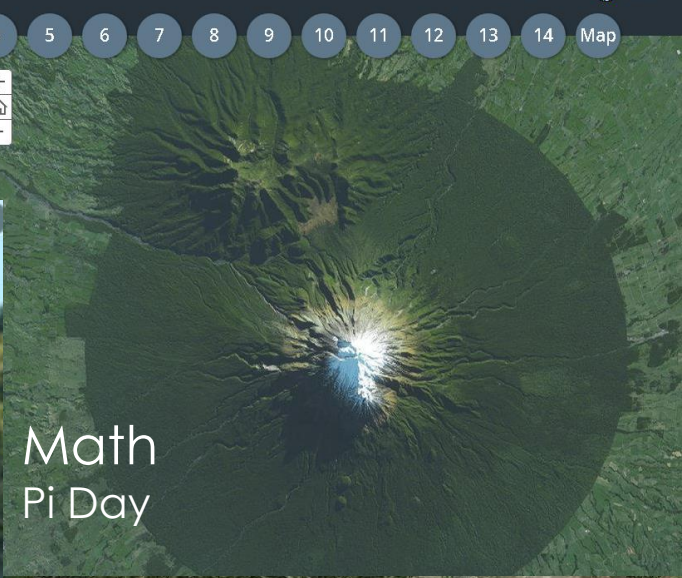
(Story Last Updated: 1/27/2015)

A World of Circles

A story map

1 2 3 4 5 6 7 8 9 10 11 12 13 14 Map

Among the complex and chaotic patterns etched onto the surface of our planet are a few landmarks of striking symmetry. Here we present a selection of natural and human-made



Math

Pi Day

Earth Science



River mile 4

Looking downriver at Navajo Bridge. Cliffs comprising Permian Kaibab Limestone, Toroweap Formation, and Coconino Sandstone rise above the Colorado River. (Photo by Steve Rauzi)



## 6. Reach beyond boundaries

Join (or build)  
vibrant information  
networks



Opportunities to collaborate and build  
on others' ideas



# Arizona's San Pedro River – a hotbed for water controversy

## Arizona's San Pedro River - through a geologist's eyes

The San Pedro River is Arizona's last undammed river. Joe Cook and his colleagues at the Arizona Geological Survey recently mapped the extent of Holocene channel and floodplain alluvium there. This 122-mile-long map, from the US-Mexico Frontier to Winkelman, Arizona, shows you the San Pedro River Valley as seen through the eyes of a geologist.

Switch to  
builder mode

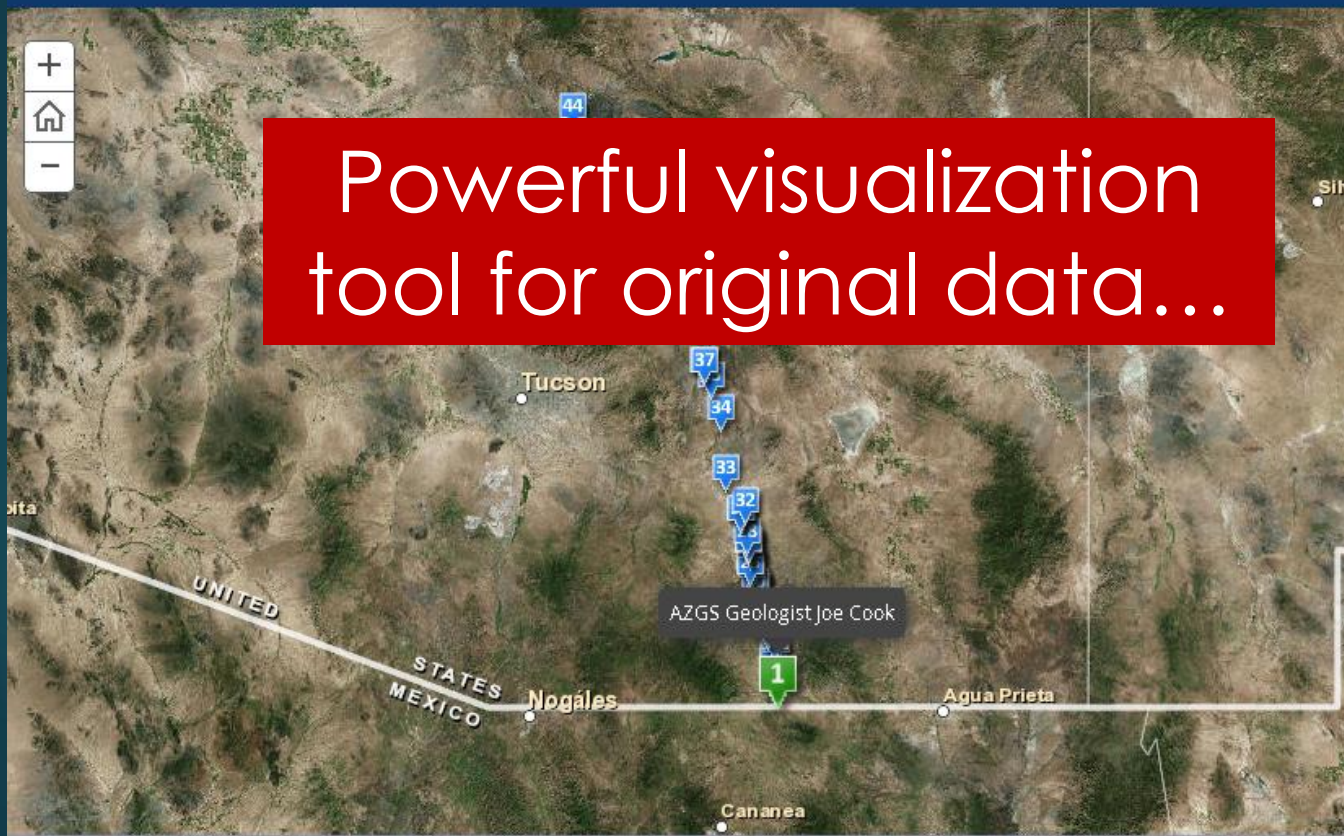
San Pedro River

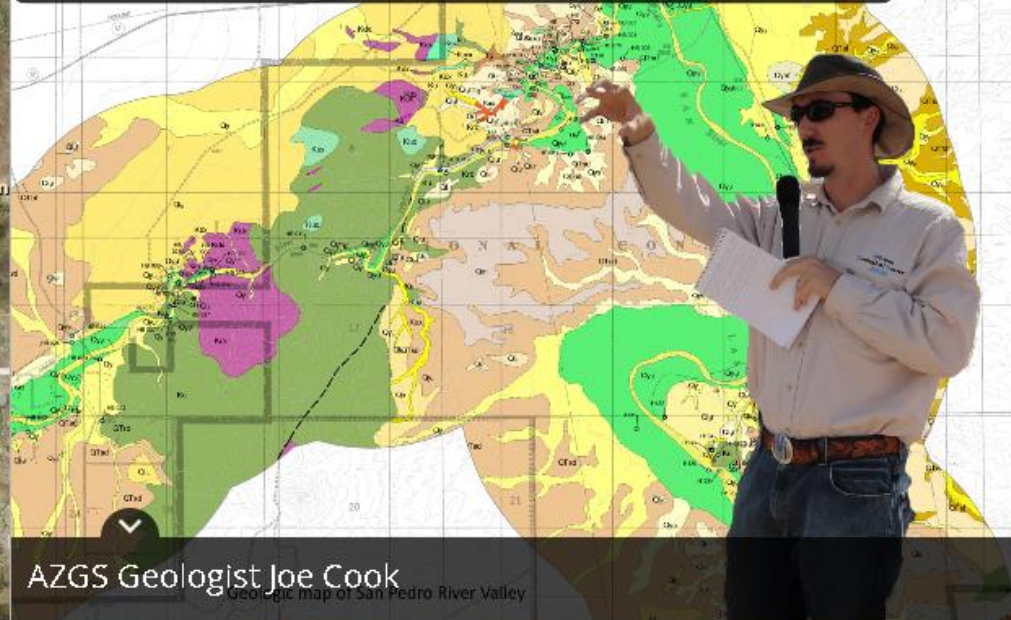


Powerful visualization  
tool for original data...



Arizona's San Pedro River: Through a geologist's eyes  
122 miles from the Mexico-U.S. Frontier to Winkelman, Arizona  
with AZGS geologist Joe Cook





# Arizona's San Pedro River – a hotbed for water controversy

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Switch to  
builder mode

San Pedro River



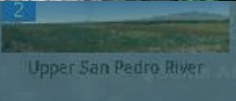
Beavers are back!

21

...while also enabling users to  
develop their own story



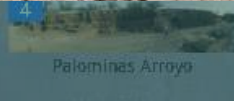
AZGS Geologist Joe Cook



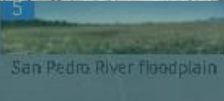
Upper San Pedro River



Holocene Map of the San  
Pedro River



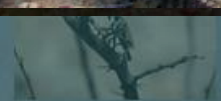
Palomitas Arroyo



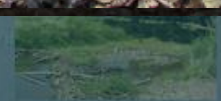
San Pedro River floodplain



Upper San Pedro River valley



Shoo fly don't bother me!



Near Hereford, AZ



Flood debris on bar



Cottonwood



# What does it take to build a story map with ArcGIS?

1. An idea – Start small & think locally ... or not
2. Activate an account at ArcGIS Online –
3. Compile/organize some information: images, video, PDFs (fact sheets), text
4. Log in to ArcGIS Online

<https://www.arcgis.com/home/>

Over 30 states have K-12 Statewide site licenses in place for schools and youth serving organizations (4-H, Scouts, etc). This includes instructional use ArcGIS Desktop access, Esri Virtual Campus access for teachers and students, and for the youth clubs: access to ArcGIS online subscriptions. Learn more at [esriurl.com/usk12gis](http://esriurl.com/usk12gis).



# Register for FREE to ArcGIS online



Request a free school account:

<http://www.esri.com/connected>





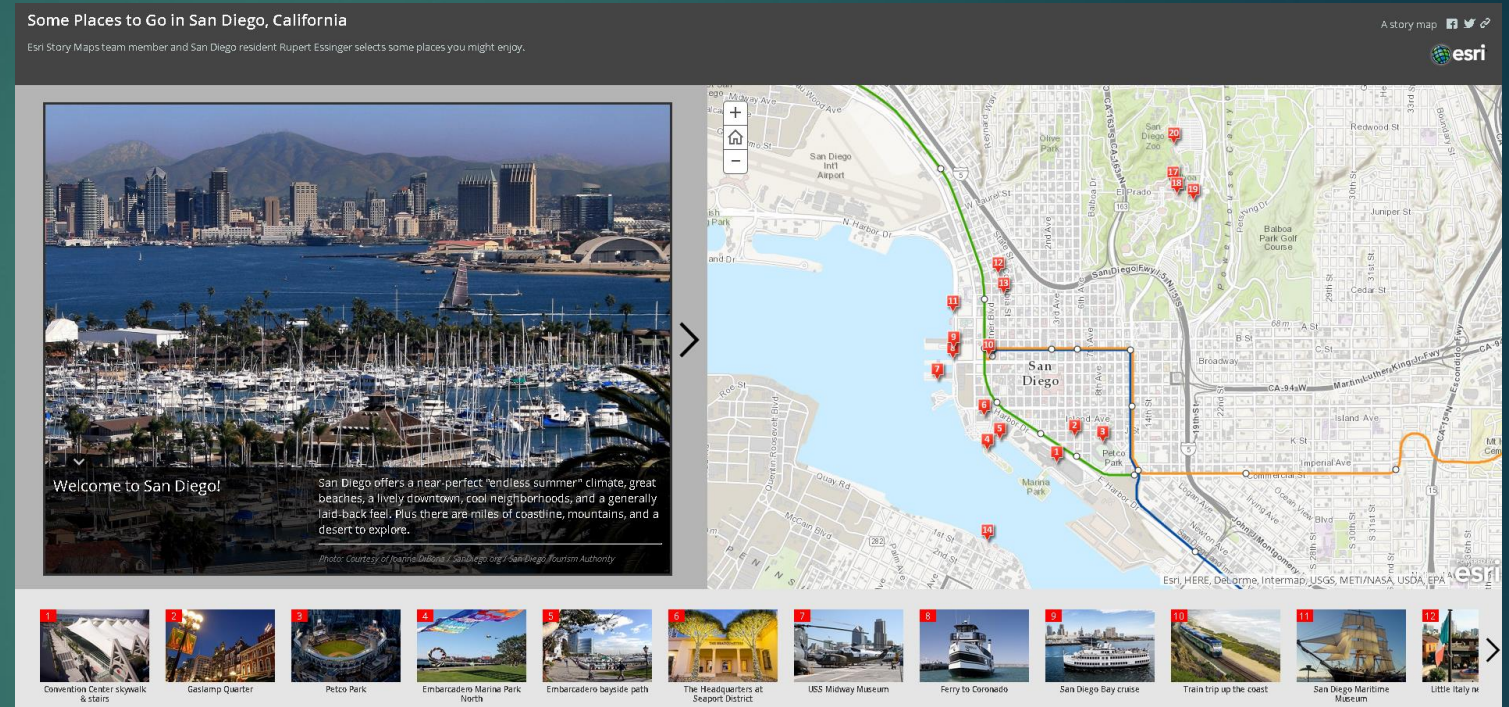
You can make a story map out of just about anything.

# What's your passion?



# Story Map Elements

1. **Basemap** (map depicting geographic area)
2. **Geolocated images** (images tagged with geographic information – latitude and longitude\*) to enable placement on the basemap)
3. **Image captions** (information explaining the significance of each image)



\*geographic information can be automatically generated using geolocation features of cell phones and online image repositories like Facebook.



# Tech Friendly (really)

Generating materials can be as easy as snapping some pics with a cell phone



Uploading them to a photosharing app like Facebook or Flickr

and tagging them with a location

Add a description

---

Who were you with?

Salton Sea

2015 ▾ March ▾ 24 ▾ + Add hour

🔒 ▾ Done Editing Cancel

# Create Original Narratives

A fun, tech-forward vehicle to structure narrative-based writing assignments such as personal essays

## Chasing the Bizarre

Lenovo Recommended Websites

A road trip to southeastern California



The idea for a road trip to Chase the Bizarre in southeastern California started on the 2014 Winter Solstice when I climbed Pusch Peak in Tucson with two friends. One of them had recently made a trip out to Joshua Tree, and had fantastic stories to tell. Of course I needed to drive the 300 miles to see the area for myself.



Salvation Mountain, created by artist Leonard Knight over several decades, is the best known attraction of Slab City, an unincorporated community outside Niland, CA.

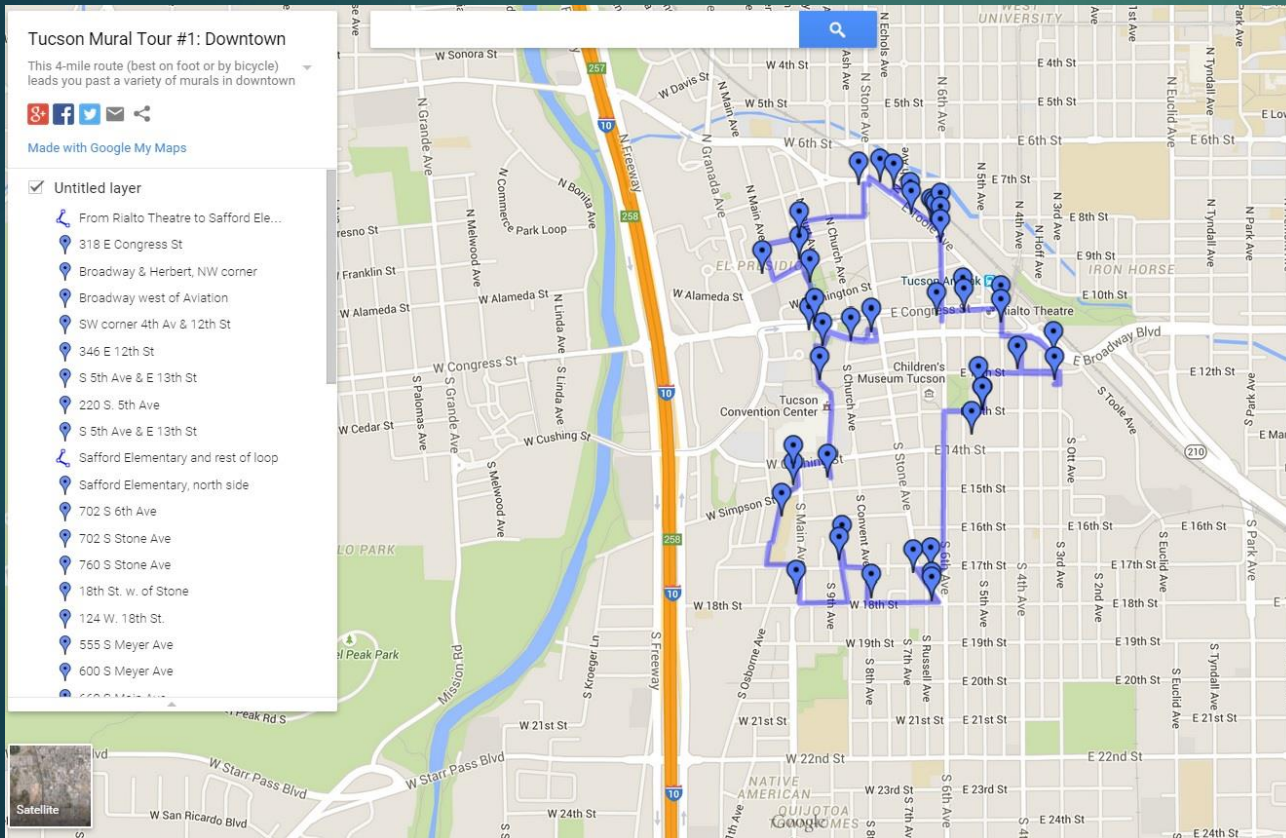




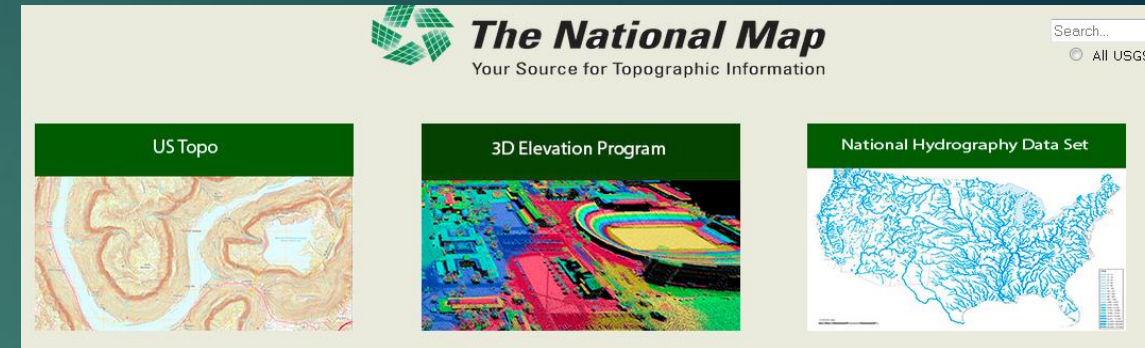
# Steps to a Story Map

## 1: Choose Material

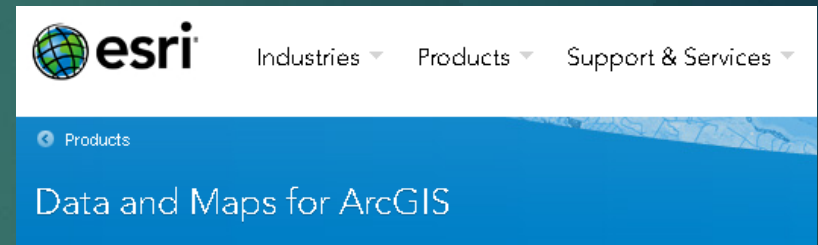
Material can be original or already available online



Online Data Resources  
free and available



<http://nationalmap.gov/>



<http://www.esri.com/data/data-maps/data-and-maps-dvd>

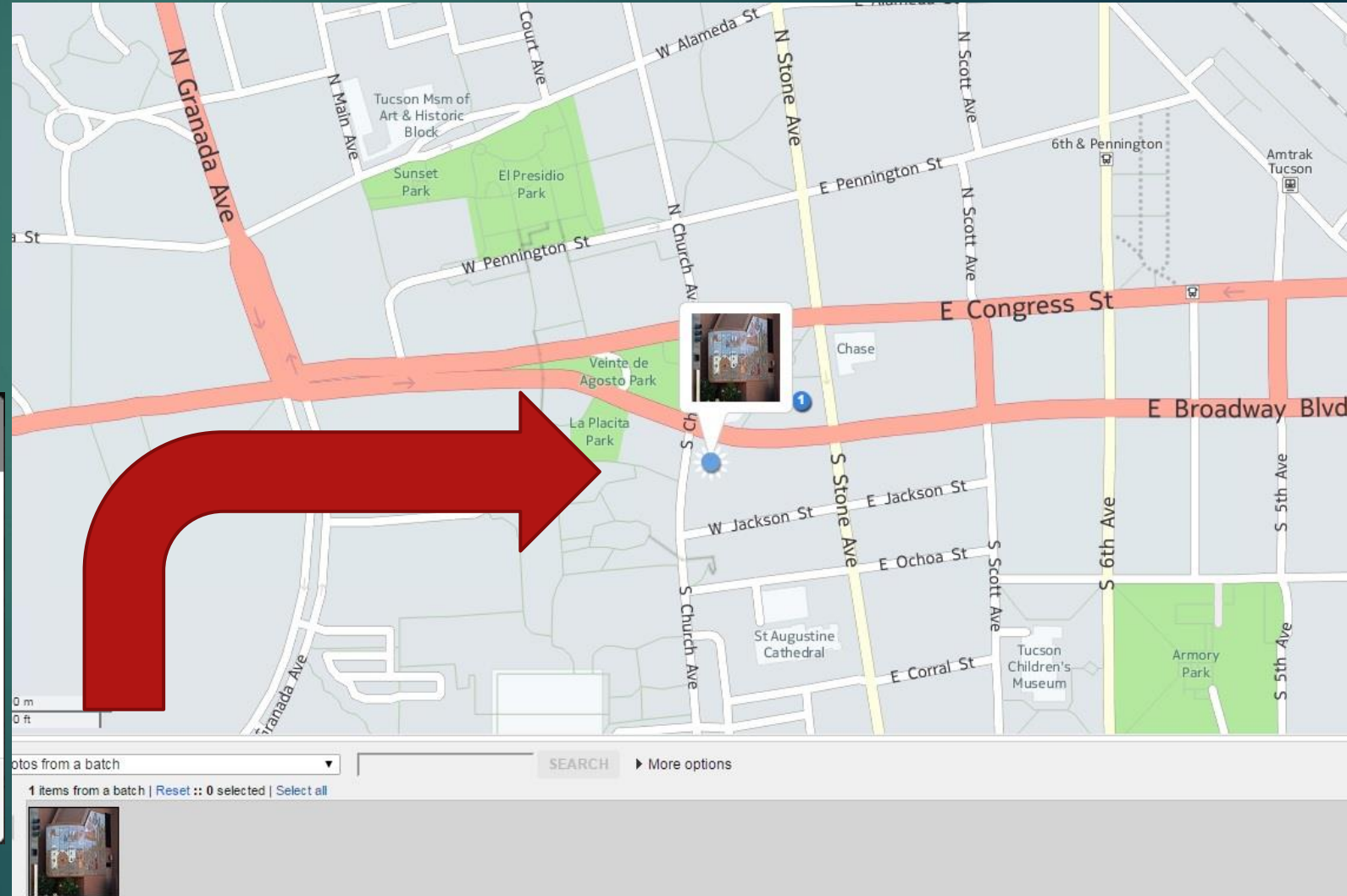
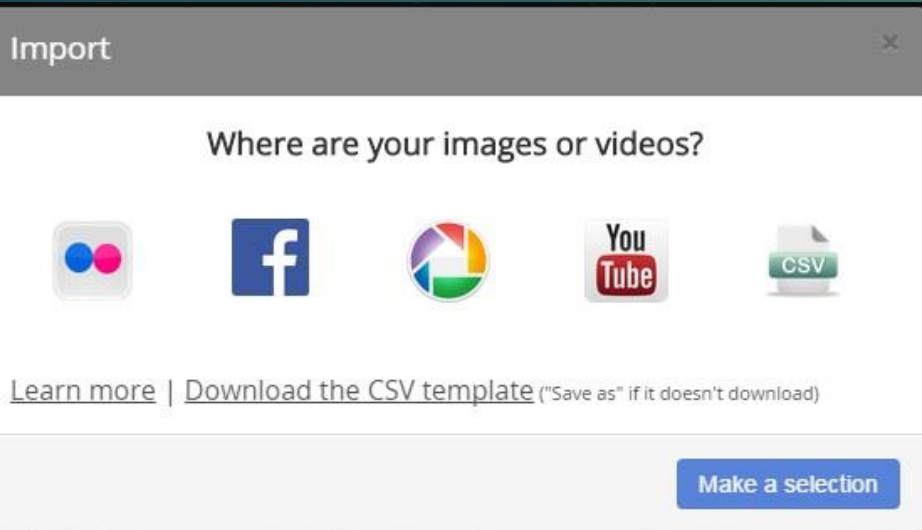


<http://k12statelicense.maps.arcgis.com/home/>

# Steps to a Story Map

## 2: Upload and geotag images

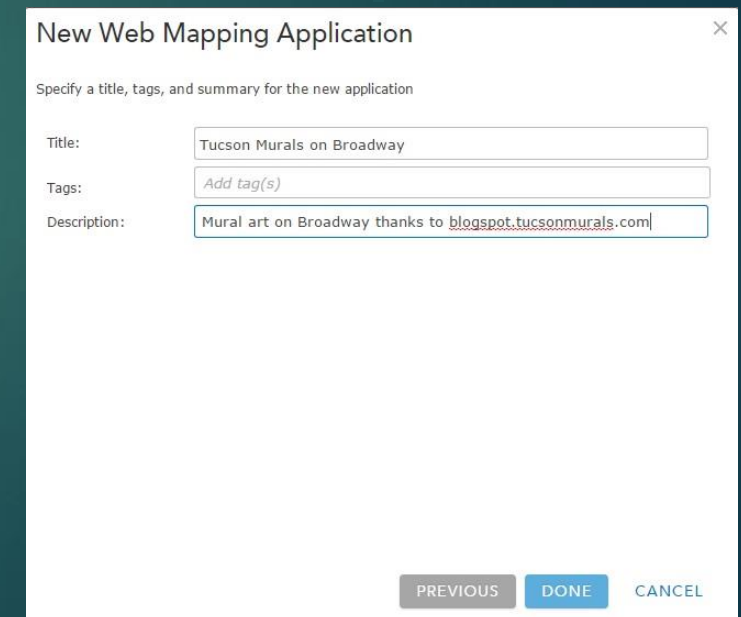
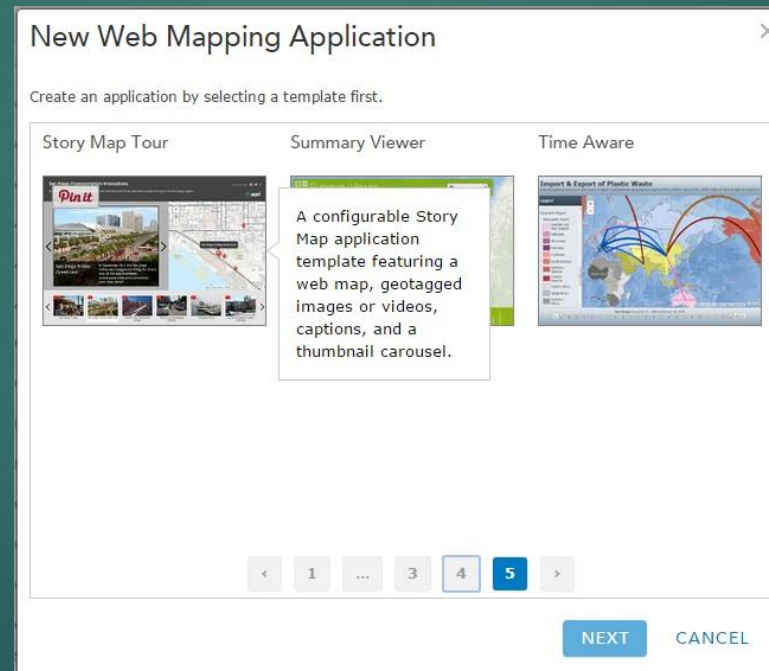
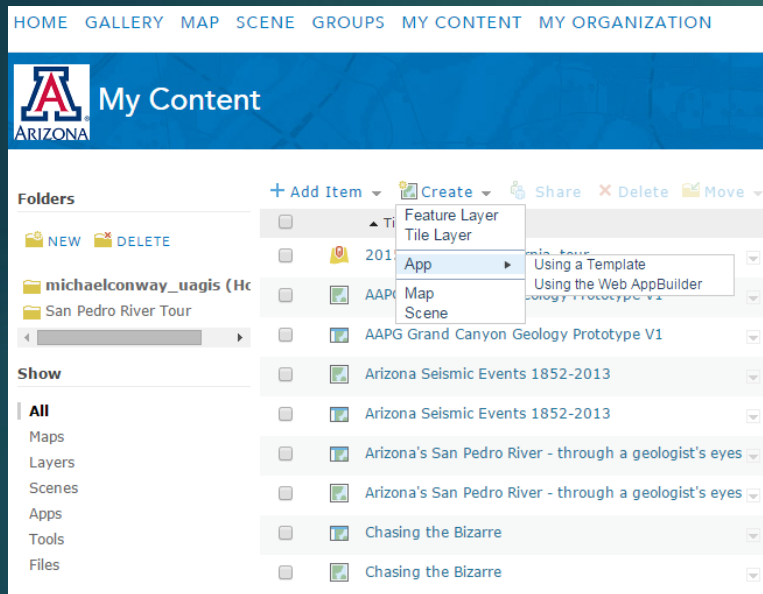
You can use images from online photo management and sharing communities such as Flickr and Facebook or download a CSV template to upload and tag your images.





# Steps to a Story Map

## 3: Create your ArcGIS project







# Customizable and Fun

Change basemaps, colors, and other features in a snap.

## Tucson Murals on Broadway

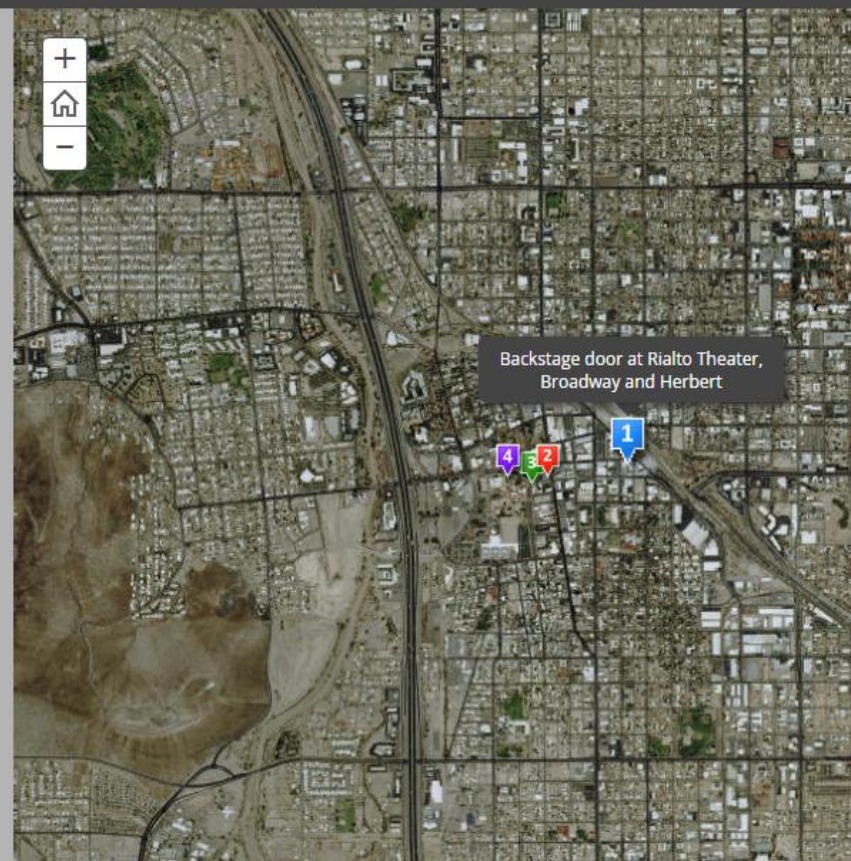
A brief tour of murals on Broadway in the downtown area. All images and information are compiled from the larger mural collection "Tucson Mural Tour #1: Downtown" and "The Tucson Murals Project," viewable at [tucsonmurals.com](#)

Switch to  
builder mode



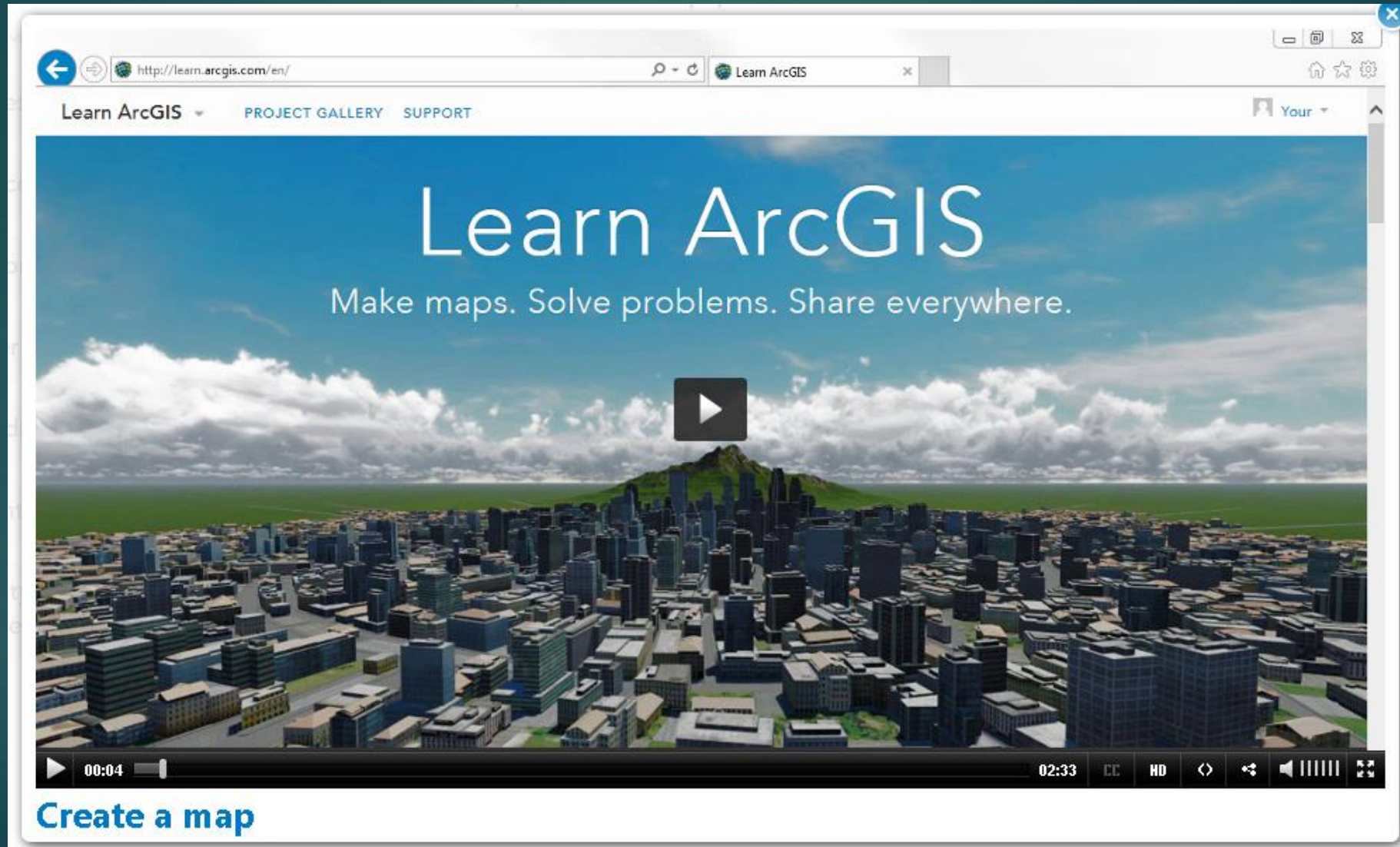
Backstage door at Rialto Theater, Broadway and Herbert

Salvador Duran, mural artist, created the work to "thank and honor every musician who crosses this door."






# ArcGIS Online has great resources, including video *tutorials*!





# Resources – contd.



- ▶ HOME
- ▶ ABOUT
- ▶ EDUCATION AND TRAINING
- ▶ SERVICES
- ▶ PROJECTS
- ▶ LAB CALENDAR
- ▶ NEWS

▼ RESOURCES

- Ersi K-12 License

▶ PAYMENT CENTER

**Geospatial Research and Information Laboratory (GRAIL)**

[grail@nau.edu](mailto:grail@nau.edu)  
928-523-9159

[More Contact Information](#)


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### ESRI K-12 EDUCATIONAL LICENSE



#### ESRI NEWS

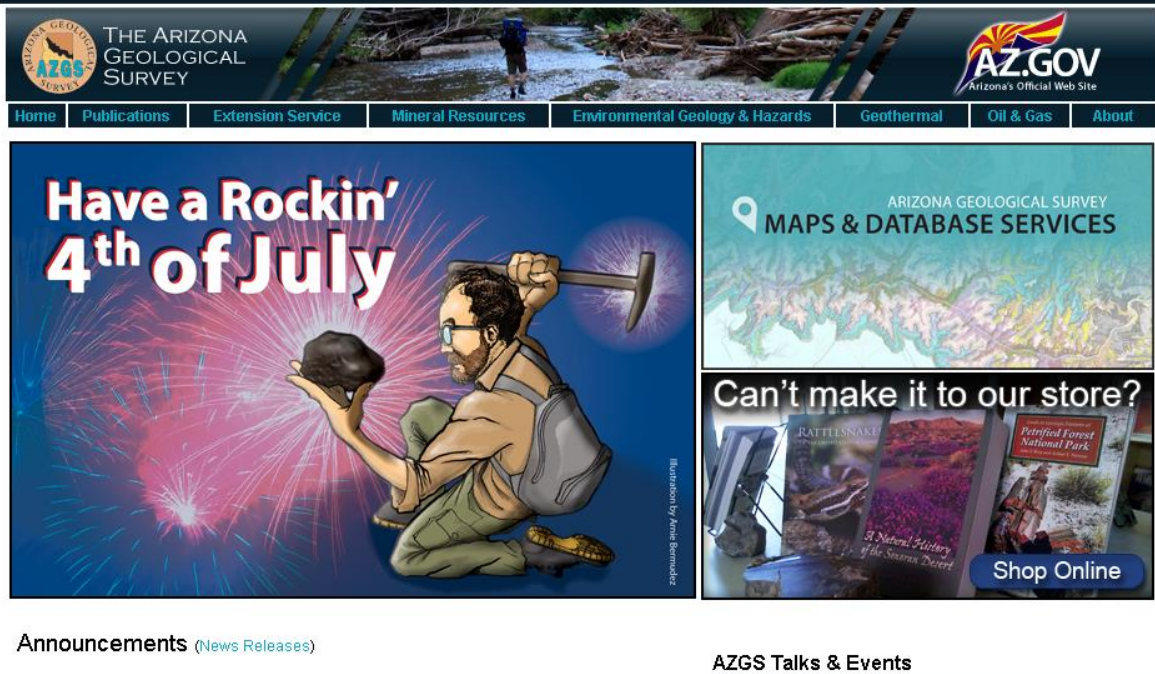
[Esri News for Education](#) is an online newsletter that offers ideas for the classroom, links to teacher resources, and much more.

The incredible problem-solving power behind Esri ArcMap is available **free** to Arizona schools and youth organizations. Esri ArcMap is powerful desktop GIS software with online organizational access that will not only allow students to improve their geospatial skills but also enhance their critical thinking abilities. Organizational access may now be obtained through a statewide site license negotiated with Esri and the [Arizona Geographic Alliance](#), and the [Arizona Geographic Information Council](#).

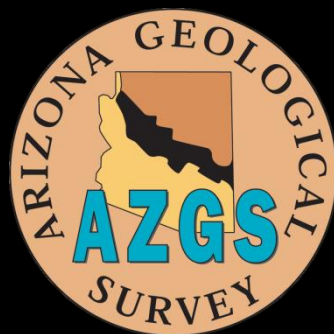
>> [Esri Statewide Educational License portal](#)



NAU ESRI Contact  
Lori Ann Rubino-Hare  
[Lori.Hare@nau.edu](mailto:Lori.Hare@nau.edu)



Azgs.az.gov



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Arizonaexperience.org



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